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09/779,788	02/07/2001	Behrooz Rezvani	VELCP009C	7770
28436	7590	07/23/2004	EXAMINER	
IP CREATORS P. O. BOX 2789 CUPERTINO, CA 95015			DEPPE, BETSY LEE	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 07/23/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/779,788

Applicant(s)

REZVANI ET AL.

Examiner

Betsy L. Deppe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because multiplexer 408 in Figure 5 is shown as a demultiplexer.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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### ***Specification***

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The abstract of the disclosure is objected to because it refers to purported merits or speculative applications of the invention. Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:

on page 3, line 10, "domains" should be "domain";

on page 5, line 17, "domains" should be "domain";

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on page 5, line 24, "CO/DLS/ONU" is not defined;

on page 11, line 25, "AFE" should be "ATM" (see page 9, lines 12-13 and 18);

on page 11, line 26, "AFE" should be "DSP";

on page 12, line 15, "430" should be "432";

on page 13, line 7, "AFE" should be "ATM";

on page 15, line 5, "FIGS. 6BC" should be "FIGS. 6B and 6C";

on page 15, line 11, "which corresponds" should be deleted;

on page 15, line 29, "FIGS. 7AB" should be "FIGS. 7A and 7B";

on page 16, line 9 and page 17, line 8, "ordered" should be "orderer";

on page 16, line 31 and page 17, line 30, "430A" should be "428A" and "orderer" should be "reorderer 430A"; and

on page 16, line 33 and page 17, line 32, "428B" should be "338B" since 338 is the Walsh decoder.

Appropriate correction is required.

### ***Claim Objections***

5. The claims are objected to because of the following informalities:
  - in claim 1, line 8, "and" should be "or";
  - in claim 2, line 7, "to" should be inserted after "and";
  - in claim 4, "and" on line 7 should be "or" and "digitized" on line 8 should be deleted;

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in claim 6, the "multiple-access encoder" on lines 7-9 should be recited before the "DFT logic" on lines 5-6 for improved readability since the DFT logic receives symbols "from the multiple-access encoder" (see line 5) and "the N digitized DMT symbols" on line 5 should be "the RN DMT symbols" for consistency;

in claim 7, line 6, "digitized" should be deleted and "tone encoder" should be "tone encoder unit" in order to be consistent with line 3;

in claim 10, line 8, "and" should be "or";

in claims 10-14, the Examiner suggests changing "act" and "acts" to "step" and "steps," respectively in order to be consistent with terminology commonly used in method claims.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear how to generate time domain redundancy or frequency domain redundancy as recited in claim 1, lines 8-9 and claim 10, lines 8-9.

Furthermore, it is unclear how the generating time or frequency domain redundancy causes or results in a symmetrical bandwidth on the transmit and receive paths. In claim 10, it appears that the use of a common set of sub-carriers and a common set of DMT tones (see lines 5-7) results in a symmetrical bandwidth regardless of time or frequency domain redundancy.

9. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. With regard to claims 1-9, it is unclear how the digital stage is connected to the analog stage.

11. With regard to claims 1-14, it is unclear what is meant by time domain redundancy and frequency domain redundancy.

12. In claim 1, it is unclear what "DMT line code" on lines 2 and 9.

13. With regard to claims 2 and 3, it is unclear whether "the digitized DMT symbols" in claim 2, line 3 is referring to the digitized DMT signals on the transmit path (see claim 1, line 5) or the receive path (see claim 1, lines 6-7).

14. In claims 2, 4-7, "N" is not defined.

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15. In claim 7, line 5, it is unclear how "RN DMT symbols" differs from "a number RN of the DMT symbols."

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Laroia et al. (US Patent No. 6,628,722 B1) (See Figures 6-10 and 17; abstract; column 6, line 10 - column 7, line 15; column 10, lines 41-46 and 54-58)

***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (703) 305-4960. The examiner can normally be reached on Monday, Wednesday and Thursday (8:30-4:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (703) 308-7728. The fax



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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Betsy L. Deppe  
Primary Examiner  
Art Unit 2637